

Title (en)  
METHODS FOR MANUFACTURING BLADE STRUCTURES

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON SCHAUFELSTRUKTUREN

Title (fr)  
PROCÉDÉS DE FABRICATION DE STRUCTURES DE PALE

Publication  
**EP 3848573 A1 20210714 (EN)**

Application  
**EP 20217866 A 20201230**

Priority  
US 202016739244 A 20200110

Abstract (en)  
A method for manufacturing a blade structure includes providing the blade structure comprising an outer surface having an aerodynamic profile. The method also includes applying one or more shape memory alloys to the outer surface of the blade structure so as to form an outer protection layer on at least a portion of the blade structure. Moreover, the method includes securing the one or more shape memory alloys to the blade structure.

IPC 8 full level  
**F03D 1/06** (2006.01)

CPC (source: CN EP US)  
**C22C 19/007** (2013.01 - CN); **C22C 19/03** (2013.01 - CN); **C23C 30/00** (2013.01 - CN); **F03D 1/0675** (2013.01 - EP US); **F05B 2230/90** (2013.01 - EP); **F05B 2280/107** (2013.01 - EP); **F05B 2280/10723** (2013.01 - EP); **F05B 2280/1074** (2013.01 - EP US); **F05B 2280/4003** (2013.01 - US); **F05B 2280/401** (2013.01 - US); **F05B 2280/5006** (2013.01 - EP US); **Y02E 10/72** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP)

Citation (applicant)

- US 201514753137 A 20150629
- US 201514753155 A 20150629
- US 201514753150 A 20150629

Citation (search report)

- [XY] CN 108005848 A 20180508 - UNIV SHANDONG SCIENCE & TECH
- [XI] US 5686003 A 19971111 - INGRAM RICHARD B [US], et al
- [Y] US 2012134838 A1 20120531 - RAMIREZ JIMENEZ CARLOS RAFAEL [MX], et al
- [A] US 2011255974 A1 20111020 - NANUKUTTAN BIJU [IN], et al

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3848573 A1 20210714**; **EP 3848573 B1 20230125**; CN 113186530 A 20210730; DK 3848573 T3 20230424; ES 2943154 T3 20230609; PL 3848573 T3 20230522; US 11486349 B2 20221101; US 2021215132 A1 20210715

DOCDB simple family (application)  
**EP 20217866 A 20201230**; CN 202110024350 A 20210108; DK 20217866 T 20201230; ES 20217866 T 20201230; PL 20217866 T 20201230; US 202016739244 A 20200110